

NOTICE

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

8430.322

1/14/80

Cancellation
Date: 1/1/81

INITIAL AND RECURRENT PILOT TESTING REQUIREMENTS AND PILOT IN COMMAND
SUBJ: INSTRUMENT PROFICIENCY CHECK REQUIREMENTS

1. PURPOSE. This notice provides guidance to inspectors and designated check airmen conducting flight checks required by FAR 135.293 and FAR 135.297. It also provides guidance in granting training and checking credit for aircraft training devices.

2. DISTRIBUTION. This notice is distributed to the branch level in the Office of Flight Operations and Flight Standards Offices in the regions, and to all Air Carrier, General Aviation, and Flight Standards District Offices.

3. BACKGROUND.

a. It has become evident that the requirements for the competency check and pilot in command (PIC) instrument proficiency checks must be clarified to assure a better standardization of the conduct of those checks. While FAR 135.293 provides for inclusion of any of the maneuvers and procedures required for the original issuance of the pilot certificate and for the category, class and type of aircraft involved, the extent of the competency check may be determined by the inspector or authorized check airman. This provision in the regulation has led to confusion and a lack of standardization as to the minimum requirements to be included on the check.

b. Additional guidance as to whether or not a specific maneuver or procedure required on a competency check or instrument proficiency check may be performed in an approved visual or nonvisual simulator or training device is also needed.

c. Questions have also been raised as to how a particular maneuver or procedure falls within the categories of maneuvers described in AC 135-3B, Air Taxi Operators and Commercial Operators, Appendix 3, which are applicable to training devices. That is, does a particular maneuver or procedure fall within Category A which allows total training and checking in that maneuver in a training device; Category B which allows total training in the maneuver in a training device, but requires checking in an aircraft or simulator; or Category C which allows some training in a training device, but requires training to proficiency and checking in an aircraft or simulator?

4. DISCUSSION.

a. Competency Checks

(1) When a competency check is given in a multiengine aircraft, the check must be given in a "type" of multiengine aircraft. For the purpose of
Distribution: A-W(FO)-3; A-X(FS)-3; Initiated By: AFO-260

A-FFS-1,2,7(MAX); AFO-500 (20 cys)

conducting a competency check, "type" means any one group of airplanes having a similar means of propulsion, the same manufacturer, and no significantly different handling characteristics. For helicopters, "type" means a specific make and model. A pilot who is qualified in more than one airplane of the same "type" and completes the 12-month competency check requirements in one airplane of that "type" simultaneously fulfills the 12-month competency check requirements for other airplanes of that "type." For example, a pilot who is currently flying both a C-310 and C-421 would only have to take an annual competency check in one of those "types." However, a turbopropeller airplane should not be considered of the same "type" as a reciprocating engine airplane. A pilot who is currently flying both a BE-200 and BE-55 would have to take a competency check in each of those "types." For a pilot flying an aircraft which requires a type rating on his certificate, the check must be in that specific aircraft type (i.e., C-500, DC-3, etc.). A pilot flying single-engine airplanes who is qualified in more than one airplane in that class, and who completes the 12-month competency check in one of the airplanes in that class, simultaneously fulfills the 12-month competency check requirements for other airplanes in that class.

(2) The competency check should include the maneuvers and procedures shown in Appendix 1 of this Notice which are applicable to the particular pilot certificate required and the operation authorized. For example, if a certificate holder's operations specifications authorize only VFR operations, the competency check would consist of the maneuvers and procedures in Appendix 1 which are appropriate for VFR operations. Each maneuver should be performed to a level of competence, as required by Section 135.293(d) of the FAR, so that the outcome of the maneuver is never in doubt.

b. PIC Instrument Proficiency Check - The instrument proficiency check requirements depend upon the certificate held by the PIC, his aircraft qualifications and the type operation conducted as follows:

(1) The PIC involved in passenger-carrying operations in a turbojet airplane, an airplane having 10 or more passenger seats or any multiengine airplane being operated by a commuter air carrier must hold an airline transport pilot certificate. The PIC must also take an instrument proficiency check which includes the maneuvers and procedures from Appendix A of Part 61 including instrument approaches, as required by FAR 135.297.

(2) The PIC involved in passenger-carrying operations in an airplane having nine or less passenger seats (excluding a turbojet airplane or multiengine airplane operated by a commuter air carrier) or a helicopter must hold at least a commercial pilot certificate with appropriate category and class ratings and an appropriate instrument rating. The PIC, in this case, must take an instrument proficiency check consisting of the maneuvers and procedures shown in Appendix 1 of this Notice.

(3) Since a PIC is required to take an instrument proficiency check every 6 months, alternating instrument proficiency checks may be counted toward fulfilling the competency check requirement provided the pilot is tested on any additional items required by the competency check.

c. For flexibility in compliance, a pilot who takes the required competency check, or PIC instrument proficiency check in the month before or the month after the month in which it is due, is considered to have taken it in the month it is due.

d. The maneuvers and procedures required for the PIC instrument proficiency check or competency check may be performed in an aircraft simulator or other training device, if the simulator or training device is approved by the FAA for the particular maneuver or procedure. Appendix 1 shows the maneuvers and procedures which may be accomplished in a training device or approved simulator during training and checks.

5. ACTION.

a. The guidelines in this Notice should be implemented immediately.

b. Appendix 1 of this Notice and the provisions therein take precedent over Table 1 in Appendix 3 of Advisory Circular 135-3B. An amendment to AC 135-3B, which brings it in line with the provisions herein, will be issued in the near future.

c. Aircraft simulator and training device approval will be in accordance with Appendix 3 of AC 135-3B.

d. Two columns entitled "maximum training device credit, initial" and "maximum training device credit, recurrent" have been incorporated in the schedule of maneuvers and procedures in Appendix 1. In these columns each maneuver or procedure has been categorized as A, B, or C for the purpose of indicating the MAXIMUM amount of credit which could be given to a particular training device for that maneuver or procedure for initial and recurrent training. The categories in Appendix 1 have been assigned based on consideration of the wide range of training devices on the market. As can be seen in Appendix 1, more credit may be given to a certain training device in the recurrent training column than the initial training column for a particular maneuver or procedure. This has been done to encourage operators to train in the procedural aspects of a maneuver prior to the required check on a recurrent basis. Initial training, on the other hand, may require training in a higher fidelity device or the actual aircraft.

e. Training devices may range from a table top instrument procedures trainer which is capable of providing an adequate transfer of learning for certain procedural functions, to a cockpit systems simulator which exactly duplicates the cockpit of a particular aircraft and provides an adequate transfer of learning for many maneuvers and systems operations.

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f. The actual amount of credit given to a particular training device will depend on the evaluation of the device by the district office based on the device itself, the operator's training program, and the type of aircraft operated. A training device should not be included in an operator's training program until it has been evaluated by the district office. The evaluation will be conducted from the functional test guide supplied by the operator. The functional test guide must list the functions (maneuvers and procedures) for which the operator is seeking credit and describe the performance tests to be conducted for each function. The district office will then determine if the performance tests show that the device performs a particular function in an adequate manner. Category A, B or C credit will then be given to the device for the particular function evaluated, but no more credit than shown in Appendix 1. Less credit than shown in Appendix 1 may be given depending on the results of the evaluation. For example, if a particular maneuver in Appendix 1 is assigned Category B credit in one of the maximum training device credit columns, a specific training device may be given Category B, C, or zero credit depending on the evaluation, but it could not be considered for Category A credit in that column for that maneuver.

g. After initial approval of a training device, it is important that a monitoring program be established whereby the device is evaluated as part of the training program and its ability to provide an adequate transfer of learning based on flight check results. If a failure rate of 20 percent or higher is noted for a maneuver which has been given Category A or B credit based on initial evaluation of a training device, the credit should immediately be downgraded or removed. Credit for that maneuver or procedure should not be reinstated until the district office is satisfied that the device and the training program can meet the criteria necessary to assure a sufficient transfer of learning. If a device is downgraded in the maximum credit column for recurrent training, it is automatically downgraded in the maximum credit column for initial training.



KENNETH S. HUNT
Director of Flight Operations

APPENDIX 1. REQUIRED MANEUVERS AND PROCEDURES FOR THE COMPETENCY CHECK
AND THE PIC INSTRUMENT PROFICIENCY CHECK

This appendix prescribes the maneuvers and procedures required for FAR Part 135 competency checks and the instrument proficiency checks. It also prescribes the type of device authorized for accomplishing each maneuver or procedure required on a check and shows the category of authorization (A, B, or C) for those maneuvers or procedures where training and checking in a training device is approved. A maneuver or procedure not having a Category A, B, or C symbol in one of the "maximum training device credit" columns may not receive training or checking credit in a training device. Such a maneuver or procedure would be accomplished in a simulator or aircraft as determined by the certificate-holding district office.

Whenever a maneuver or procedure is authorized to be performed in a non-visual simulator, it may also be performed in a visual simulator or in an aircraft. Similarly, when authorized in a training device, it may be performed in a visual or a nonvisual simulator or in an aircraft.

For the purpose of this schedule, the following symbols mean:

C - Performance authorized in classroom.

A - Performance required in an airplane.

H - Performance required in a helicopter.

I - Performance required in simulated instrument conditions
(air or ground).

N - Performance authorized in an approved nonvisual simulator.

T - Performance authorized in a training device approved for that
maneuver.

V - Performance authorized in an approved visual aircraft simulator.

Category A - Total training and checking in the maneuver or procedure may be accomplished in a training device.

Category B - Total training in the maneuver or procedure may be accomplished in this device, but checking authorized only in an aircraft or an aircraft simulator.

Category C - Partial training allowed in a training device, but training to proficiency and checking authorized only in an aircraft or an aircraft simulator.

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NOTE: A simulator or training device must represent at least the same aircraft category, class, and in the case of an aircraft simulator, the same type as the aircraft flown. The simulator and training devices must meet the requirements outlined in Appendix 3 to AC 135-3B.

Schedule of Maneuvers and Procedures.

	INSTRU. PROF. <u>CHECK</u>	COMP. <u>CHECK</u>	MAX. TRNG. DEVICE CREDIT <u>INIT.</u>	MAX. TRNG. DEVICE CREDIT <u>RECUR.</u>
1. <u>Preflight.</u>				
a. <u>Equipment Check (Oral or Written.)</u> As part of the check, the equipment check should be coordinated with the flight maneuvers portion but not performed during that portion of the check. The check covers:	C	C	Cat A	Cat A
(1) Airplane documents to be carried onboard.				
(2) Familiarization with the provisions of the approved Airplane Flight Manual.				
(3) Flight planning procedures.				
b. <u>Inspection.</u> The pilot should demonstrate:				
(1) A visual inspection of the interior and exterior of the aircraft, explaining the purpose for inspecting each item;	A/H	A/H		
(2) The use of the pre-start checklist, appropriate control system checks, starting procedures, radio and equipment checks prior to flight.	T	T	Cat A	Cat A

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	INSTRU. PROF. CHECK	COMP. CHECK	MAX. TRNG. DEVICE CREDIT INIT.	MAX. TRNG. DEVICE CREDIT RECUR.
c. <u>Taxiing - Airplane.</u> This maneuver includes sailing or docking procedures where appropriate and in accordance with instructions issued by ATC or simulated by the person conducting the check.		A		Cat B
d. <u>Taxiing - Helicopter.</u> Includes demonstration of proper hovering techniques and safe maneuvering of the helicopter around other aircraft.		H		Cat C
e. <u>Powerplant Checks.</u> Appropriate to the aircraft used for the check.		N	Cat B	Cat B
2. <u>Takeoffs.</u>				
a. <u>Normal - Airplane.</u> One normal takeoff which, for the purpose of this operation, begins when the airplane is taxied into position on the runway to be used.		V	Cat C	Cat B
b. <u>Crosswind - Airplane.</u> May be waived by the person conducting the check when, in his judgment, the maneuver is impractical or unsafe under existing conditions.		V	Cat C	Cat B
c. <u>Normal - Helicopter.</u> Demonstration of the transition from a stabilized hover to a climb during normal conditions.		V	Cat C	Cat C
d. <u>Crosswind - Helicopter.</u> May be waived by the person conducting the check when, in his judgment, the maneuver is impractical or unsafe under existing conditions.		V	Cat C	Cat C

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	INSTRU. PROF. <u>CHECK</u>	COMP. <u>CHECK</u>	MAX. TRNG. DEVICE CREDIT <u>INIT.</u>	MAX. TRNG. DEVICE CREDIT <u>RECUR.</u>
e. <u>Powerplant Failure - Multi-engine Aircraft.</u> One takeoff with simulated failure of the most critical powerplant:		V	Cat C	Cat B
(1) At a point after V_1 , and before V_2 , that in the judgment of the person conducting the check is appropriate to the airplane type under prevailing conditons;				
(2) At a point as close as possible after V_1 when V_1 and V_2 (V_1 and V_R) are identical; or				
(3) At the appropriate speed for nontransport category airplanes and helicopters, but in any case before reaching 200 feet AGL.				
f. <u>Rejected Takeoff.</u>		V	Cat C	Cat B
3. <u>Inflight Maneuvers.</u>				
a. <u>Steep Turns.</u> At least one turn in each direction involving a bank angle of 45 degrees and of 360 degrees duration.		N	Cat B	Cat B
b. <u>Stalls - Airplanes.</u> For the purpose of this maneuver, the required stall is reached when there is a perceptible buffet or other response to initial stall entry. A stall demonstration is required in each of the following configurations:		N	Cat C	Cat B
(1) Takeoff configuration (except in airplanes requiring zero flap for takeoff);				

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		MAX.	MAX.
		TRNG.	TRNG.
		DEVICE	DEVICE
INSTRU.	COMP.	CREDIT	CREDIT
PROF.	CHECK	INIT.	RECUR.
<u>CHECK</u>	<u>CHECK</u>	<u>INIT.</u>	<u>RECUR.</u>

(2) Clean configuration;

(3) Landing configuration.

At least one of the above maneuvers should be performed using a bank angle between 15 and 30 degrees.

c. Specific Flight Characteristics.

N Cat C Cat B

d. Powerplant Failures.

N Cat C Cat B

4. Approaches & Landings. At least three actual landings (one to a full stop) should be made.

a. Normal Landing. A normal landing is any landing made with all systems operating and the aircraft in a normal landing configuration.

A/H Cat C Cat C

b. Crosswind Landing. May be waived if considered unsafe or impractical by the person conducting the check in existing conditions.

A/H Cat C Cat C

c. Engine-out Landing (Multi-engine Aircraft). One approach maneuvering to a landing with a simulated engine failure.

A/H Cat C Cat C

d. Rejected Landing. A rejected landing, including a normal missed approach procedure, that is rejected approximately 50 feet over the runway threshold. This maneuver may be combined with instrument approaches, but instrument conditions need not be simulated below 200 feet above the surface.

V Cat C Cat B

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	INSTRU. PROF. CHECK	COMP. CHECK	MAX. TRNG. DEVICE CREDIT INIT.	MAX. TRNG. DEVICE CREDIT RECUR.
e. <u>Helicopter Pinnacle/Rooftop Approach and Landing.</u> Demonstration of an approach and landing to a selected touch down point on a small area that is higher than the surrounding terrain. Required only when applicable to the certificate holder's operations.		H	Cat C	Cat C
f. <u>Helicopter Autorotation.</u> In response to a simulated emergency, the pilot will perform an autorotative descent to a designated landing area. A power recovery may be made when the check pilot determines that a safe landing is assured.		H	Cat C	Cat C
g. <u>Helicopter Power Failure at a Hover.</u> During a stabilized hover or forward air taxiing, the person conducting the check may close the throttle to simulate power failure.		H	Cat C	Cat C
h. <u>Night Landing.</u>		A/H	Cat C	Cat C
5. <u>Normal & Abnormal Procedures.</u> Each pilot should demonstrate the proper use of the systems and devices listed below which are appropriate to the type aircraft as the person conducting the check finds necessary to determine the required proficiency:				
a. Anti-icing & De-icing Systems.		N	Cat B	Cat B
b. Auto-pilot Systems.		N	Cat B	Cat B
c. Automatic or other Approach Aids.		N	Cat B	Cat B
d. Stall Warning, Stall Avoidance, and Stability Augmentation Devices.		T	Cat A	Cat A

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e. Airborne Radar Devices.		T	Cat A	Cat A
f. Hydraulic & Electrical System.		T	Cat A	Cat A
g. Landing Gear & Flap System Failures.		T	Cat A	Cat A
h. Airborne Nav/Comm Equipment Failures.		T	Cat A	Cat A
6. <u>Emergency Procedures.</u> Each applicant should demonstrate the proper use of as many systems and devices listed below as the person conducting the check finds are necessary to determine that the applicant has a practical knowledge of, and ability to perform such procedures:				
a. Fire in Flight.		T	Cat A	Cat A
b. Smoke Control.		T	Cat A	Cat A
c. Rapid Decompression.		T	Cat A	Cat A
d. Emergency Descent.		N	Cat B	Cat B
e. Any other emergency procedures outlined in the appropriate approved aircraft flight manual.		T	Cat A	Cat A
7. <u>Instrument Procedures.</u>	I			
a. <u>Instrument.</u> One takeoff with instrument conditions simulated from an altitude of 200 feet above the runway elevation.	V		Cat B	Cat B
b. <u>Area Departures & Arrivals.</u> During each of these procedures, the pilot should demonstrate the proper response to actual or simulated ATC instructions and the proper use of navigation facilities.	N		Cat B	Cat B

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	INSTRU. PROF. <u>CHECK</u>	COMP. <u>CHECK</u>	MAX. TRNG. DEVICE CREDIT <u>INIT.</u>	MAX. TRNG. DEVICE CREDIT <u>RECUR.</u>
e. Airborne Radar Devices.		T	Cat A	Cat A
f. Hydraulic & Electrical System.		T	Cat A	Cat A
g. Landing Gear & Flap System Failures.		T	Cat A	Cat A
h. Airborne Nav/Comm Equipment Failures.		T	Cat A	Cat A
6. <u>Emergency Procedures.</u> Each applicant should demonstrate the proper use of as many systems and devices listed below as the person conducting the check finds are necessary to determine that the applicant has a practical knowledge of, and ability to perform such procedures:				
a. Fire in Flight.		T	Cat A	Cat A
b. Smoke Control.		T	Cat A	Cat A
c. Rapid Decompression.		T	Cat A	Cat A
d. Emergency Descent.		N	Cat B	Cat B
e. Any other emergency procedures outlined in the appropriate approved aircraft flight manual.		T	Cat A	Cat A
7. <u>Instrument Procedures.</u>	I			
a. <u>Instrument.</u> One takeoff with instrument conditions simulated from an altitude of 200 feet above the runway elevation.	V		Cat B	Cat B
b. <u>Area Departures & Arrivals.</u> During each of these procedures, the pilot should demonstrate the proper response to actual or simulated ATC instructions and the proper use of navigation facilities.	N		Cat B	Cat B

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transition to a missed approach is complete.				
e. <u>Missed Approach.</u> Each pilot should demonstrate at least one complete missed approach proce- dure with simulated failure of one powerplant (multiengine air- craft) either continuing from the final approach or induced after the missed approach transition. These procedures may be performed independently or in conjunction with those described under 7d(1), 7d(2), or 7d(3).	V		Cat C	Cat B
f. <u>Circling Approach.</u> May be performed in conjunction with the VOR and NDB approach.	V			Cat B
g. <u>Radio Navigation Procedures.</u> As appropriate to the operator's operation and aircraft flown.		N	Cat B	Cat B

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

WASHINGTON, D.C. 20591



FEB 14 1980

Mr. Anthony R. Romano
Vice President and General Manager
Analog Training Computers
185 Monmouth Parkway
West Long Branch, New Jersey 07764

Dear Mr. Romano:

This is in response to Mr. William R. McGehee's January 22 letter regarding the use of the ATC-610 and ATC-710 flight simulator during the conduct of a practical test required for instrument rating certification.

Federal Aviation Regulations (FAR) require an applicant for an instrument rating to receive instruction in VOR, ADF, and ILS approaches (reference Section 61.65(c)(3) or (d)(3)), as appropriate. Because the necessary instrument approach facilities are not available in some areas, the regulation provides for the use of airborne or ground trainers for the simulation of ILS and ADF approaches during training. When taking the practical test the applicant must demonstrate all of the approaches listed in Section 61.65(c)(3) or (d)(3), as appropriate. A minimum of one approach must be demonstrated in an airplane or helicopter, as appropriate. The inspector/examiner conducting the flight test may, at his discretion, allow the applicant to perform the instrument approach(es), not selected for actual flight demonstration, in a flight simulator that meets the requirements of Section 141.41(a)(1) of the FAR.

We trust the information provided will be helpful.

Sincerely,

A handwritten signature in dark ink, appearing to read "Bernard A. Geler", is written over the typed name.

to BERNARD A. GELER
Chief, General Aviation &
Commercial Division, AFO-800
Office of Flight Operations.

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